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(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0243253 A1****Knight**(43) **Pub. Date:****Nov. 2, 2006**(54) **RELATING TO FUEL INJECTION SYSTEMS**(52) **U.S. Cl.** ..... 123/447; 123/467; 123/459(76) **Inventor:** **Andrew Knight**, Stonehouse (GB)**Correspondence Address:****DELPHI TECHNOLOGIES, INC.****M/C 480-410-202****PO BOX 5052****TROY, MI 48007 (US)**(21) **Appl. No.:** **11/411,630**(22) **Filed:** **Apr. 26, 2006**(30) **Foreign Application Priority Data**

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A fuel injection system for supplying pressurised fuel to a fuel injector (200) comprises an accumulator volume (606) for supplying fuel at rail pressure (P1) to the fuel injector (200) through a rail fuel supply passage (608) and a fuel pressurising arrangement (604) for supplying fuel at a selected pressure greater than rail pressure (P2) to the fuel injector (200) through a pressurised fuel supply passage (614). A fuel shut-off valve (618) is provided in the system which is operable between a closed position in which fuel is retained within the pressurising arrangement (604) and an open position in which pressurised fuel is supplied to the injector (200) from the pressurising arrangement (604) during an injection of fuel from the rail fuel supply passage (608). Operating the shut-off valve in this way provides a boost in the fuel pressure delivered during an injection event.

